

## CLAIMS

1. A data transmission method which is used in a data transmission system comprising a first transceiver and a second transceiver, the method comprising:

- 5 receiving a broadband xDSL signal with the first transceiver,  
modulating a carrier with the received xDSL signal,  
transmitting the modulated signal over the air path from the first transceiver to the second transceiver, and  
demodulating the modulated signal into an xDSL signal after reception.  
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2. A data transmission method which is used in a data transmission system comprising a first transceiver and a second transceiver, the method comprising:

- receiving a broadband xDSL signal with the first transceiver, from  
15 which signal the xDSL format is removed in the first transceiver,  
modulating a carrier in the first transceiver with the signal whose xDSL format was removed,  
transmitting the modulated signal over the air path to the second transceiver.

3. A data transmission method which is used in a data transmission system comprising a first transceiver and a second transceiver, the method comprising:

- receiving a broadband xDSL signal with the first transceiver, from  
which signal the xDSL format is removed in the first transceiver, and  
25 transmitting the signal whose xDSL format was removed from the first transceiver either over the air path or by cable to the second transceiver which can be disconnected from the first transceiver.

4. A method as claimed in claim 1, 2 or 3, wherein several simultaneous xDSL connections to be transmitted over the air path are established  
30 from the second transceiver to the first transceivers.

5. A method as claimed in claim 1, 2 or 3, wherein a signal is transmitted to the radio path to detect the readiness of the first transceiver to start establishing a connection with the second transceiver.

6. A method as claimed in claim 1, 2 or 3, wherein the first transceiver transmits to the second transceiver a signal comprising the telephone number and/or network address of the first transceiver.

7. Terminal equipment comprising  
 5 a frame part (299) which comprises a DSL block (196) for removing the format of the xDSL-format signal received by the terminal equipment,  
 a part (201) disconnectable from the frame part and comprising a memory (197e) for storing the information in the deformatted signal, and  
 the DSL block (196) being arranged to generate an xDSL signal  
 10 and to transmit the generated xDSL signal outside the terminal equipment.

8. Terminal equipment comprising  
 a DSL block (196) for generating a signal in xDSL format,  
 a transceiver (141b) which is arranged to modulate a carrier with the xDSL-format signal, and  
 15 the transceiver (141b) being arranged to transmit the modulated carrier to the air path,  
 the transceiver (141b) being arranged to receive a modulated carrier and to demodulate it, and  
 the DSL block (196) being arranged to remove the format of the demodulated xDSL-format signal.  
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9. Terminal equipment comprising  
 a frame part (299) which comprises a transceiver (141a) for receiving an xDSL-format signal from the air path and for transmitting an xDSL signal to the air path, and  
 25 a part (201) disconnectable from the frame part and comprising a DSL block (196) for generating a signal in xDSL format and for removing the format of an xDSL-format signal received from the air path, and  
 the part (201) comprising a transceiver (141b) for receiving an xDSL-format signal from the air path and for transmitting an xDSL signal to the  
 30 air path.

10. Terminal equipment as claimed in claim 7 or 9, wherein the part (201) comprises a display (197g) for displaying the information in the xDSL signal.

11. Terminal equipment as claimed in claim 8, wherein the terminal  
 35 equipment comprises a frame part (299) and a part (201) disconnectable from

the frame part and comprising a memory (197e) for storing the information in the xDSL signal.

12. Terminal equipment as claimed in claim 9, wherein the part (201) comprises a memory (197e) for storing the information in the xDSL signal.

13. Terminal equipment as claimed in claim 7 or 9, wherein the frame part comprises a generator (161) which is arranged to transmit a signal to the part (201) which comprises a detector (171) which is arranged to detect on the basis of the signal transmitted by the generator that the first transceiver is free to establish a connection to the second transceiver.

14. Terminal equipment as claimed in claim 7 or 9, wherein the frame part comprises a generator (161) which is arranged to transmit a signal to the part (201) which comprises a detector (171) which is arranged to detect on the basis of the signal transmitted by the generator that the first transceiver has an ongoing connection.

15. Terminal equipment as claimed in 7, 8 or 9, wherein the terminal equipment comprises a block (198) which is arranged for receiving and transmitting a voice signal.

16. Terminal equipment as claimed in 7, 8 or 9, wherein the terminal equipment comprises a block (193d) which is arranged for establishing a mobile telephone connection.

17. A data transmission system which comprises a first transceiver (299) and a second transceiver (201), and

the first transceiver comprises a DSL block (196) which is arranged to receive an xDSL signal and to remove the xDSL format,

the first and second transceiver comprise a connection means (192b) for connecting the first and second transceiver to each other and for disconnecting the transceivers,

the second transceiver comprises a memory (197e) which is arranged to store the xDSL signal deformatted by the DSL block, and

the second transceiver is arranged to transmit information to the xDSL block (196) of the first transceiver, the block being arranged to generate an xDSL signal into which the xDSL block is arranged to input the information transmitted by the second transceiver,

the data transmission system comprises a cable (18) connected to the first transceiver for connecting the first transceiver to the data transmission system, and

5 the first transceiver is arranged to transmit the generated xDSL signal by said cable (18) to the data transmission system.

18. A data transmission system which comprises a first transceiver (299) and a second transceiver (201), and

10 the first transceiver comprises a transceiver (141a) which is arranged to receive a broadband xDSL signal, to modulate a carrier with the received xDSL signal, and to transmit the modulated carrier over the air path to the second transceiver (201),

the second transceiver (201) comprises a transceiver (141b) which is arranged to receive the carrier transmitted by the first transceiver and to demodulate the xDSL signal modulated into the carrier, and the second transceiver (201) comprises

15 a DSL block (196) which is arranged to remove the xDSL format of the demodulated xDSL signal.

19. A data transmission system which comprises a first transceiver (299) and a second transceiver (201), and the data transmission system comprises

20 a server (10) and a transceiver (121) which is arranged to receive a signal from the server and to generate an xDSL signal to which the transceiver (121) is arranged to input the signal received from the server,

25 the transceiver (121) being arranged to transmit the xDSL signal to the first transceiver,

both the first and the second transceiver comprising their individual connection means (192b) to galvanically connect the first and the second transceiver to each other,

30 the first transceiver being arranged to transmit the signal received from the transceiver (121) either in the xDSL format or with the xDSL format removed over the air path or through the connection means (192b) to the second transceiver,

35 the second transceiver being arranged to transmit the signal to the first transceiver either in the xDSL format or without the xDSL format over the air path or through the connection means (192b),

the first transceiver being arranged to generate an xDSL format and to transform the signal received from the second transceiver into the xDSL format, if the signal coming from the second transceiver is transmitted without said format,

- 5 the first transceiver being arranged to transmit the xDSL-format signal to the transceiver (121) which is arranged to remove the format of the received xDSL-format signal and to transmit the signal inside the format to the server (10).

20. A data transmission system as claimed in claim 18 or 19,  
10 wherein for each first transceiver (299) the data transmission system comprises an individual pair cable (18) which is arranged to connect the transceiver (299) to the data transmission system.

21. A data transmission system as claimed in claim 17, 18 or 19,  
15 wherein the second transceiver is arranged to establish several simultaneous xDSL connections to be transmitted over the air path to the first transceivers.

22. A data transmission system as claimed in claim 17, 18 or 19,  
20 wherein the first transceiver comprises a generator (1619 which is arranged to transmit a signal to the radio path, and the second transceiver comprises a detector (171) to detect the signal transmitted by the generator, and the second transceiver is arranged on the basis of the signal received by the detector to detect the readiness of the first transceiver to start establishing a connection to said second transceiver.

23. A data transmission system as claimed in claim 17, 18 or 19,  
25 wherein the first transceiver (299) is arranged to transmit to the second transceiver (201) a signal which comprises the telephone number and/or network address of the first transceiver.

24. A data transmission system as claimed in claim 17, 18 or 19,  
30 wherein the data transmission system comprises a switched telephone network (21), mobile network (300) and packet-switched data transmission network (11), to each of which the second transceiver (201) is arranged to establish a connection.